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10/732,773

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Thomas Szolyga

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EXAMINER

PAPE, ZACHARY

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/732,773

Applicant(s)

SZOLYGA ET AL.

Examiner

Zachary M. Pape

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The following detailed action is in response to the correspondence dated 10/14/2005.

- Claims 1-31 are rejected.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6, 15, 26, and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 6 and 15, the applicant's recite that a sideways force applied leftward or rightward to the handle will also cause an insertion force. While such a limitation is somewhat supported in the specification (See page 9 line 31 – page 10 line 5), the specification does not provide enough detail, nor is it possible for the handle, as described in the drawings, to function as claimed. As evidence, the examiner respectfully notes that the drawings only disclose a force (F) as shown in Fig 5a which is not applied Leftwardly or Rightwardly on the handle.

With respect to claims 26 and 28, the applicants recite that, "the insertion force is greater than the force applied to the handle" which is new matter and thus not supported in the specification.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-7, 12, 17-31 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1-7, and 17-31, the examiner recognizes that there is support in the specification for the force limitations added to claims 1, 17 and 21, however the examiner asserts that the new limitations, if interpreted in a certain manner, contradict the applicant's present invention. While the examiner believes that the applicants are attempting to break down the forces and designate them to describe how the invention is used, the examiner respectfully notes that the force limitations could further be interpreted as an entirely separate force used to insert the drive, when in fact, there is only one force being used to insert the drive (The force F applied to the handle as illustrated in Fig 5a). In other words, the force F (as illustrated in Fig 5a) is the source of all forces placed on the disk drive to insert the drive, but the amended claims leave open the possibility that there are other external forces at work to insert the drive rather than just the one force applied to the handle which is the "parent" for all other forces present.

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With respect to claim 12, where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "solenoid" in claim 12 is used by the claim to mean "a base and a rod" (See specification Paragraph 21, Line 25), while the accepted meaning is "An assembly used as a switch, consisting of a coil and a metal core free to slide along the coil axis under the influence of a magnetic field" (See "The American Heritage College Dictionary 4th edition page 1318). The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5, 7, 8-11, 13-14, 16-20, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 5,947,572 – herein after referred to as Chang-572) in view of Chang (US 5,959,834 – herein after referred to as Chang-834).

With respect to claim 1, as best can be understood by the examiner, Chang-572 teaches a removable device (20) operable to be releasably mounted to an electronic system (30), the removable device comprising a multifunction handle (21) coupled to the device, the multifunction handle including a force-developing portion (22), the handle operable to develop an insertion force at the force-developing portion responsive to a force applied to the handle and different than the force applied to the handle (See Chang-572 Column 4, Lines 5-23). Chang-572 fails teach an interlock portion adapted to be engaged by an interlock component and operable to secure the removable device in a desired position and prevent use of the handle responsive to the interlock portion being engaged by the interlock component. Chang-834 teaches a device (10/20) with a handle (21) including an interlock portion (22) adapted to be engaged by an interlock component (36) and operable to secure the removable device in a desired position and prevent use of the handle responsive to the interlock portion being engaged by the interlock component (Chang-834 column 2, Lines 49-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chang-834 with the teachings of Chang-572 to prevent damage to the disk drive (Chang-834 Column 1, Lines 19-22).

With respect to claim 2, as best can be understood by the examiner, Chang-572 further teaches that the force-developing portion (22) comprises a cam (As illustrated in Fig 3).

With respect to claim 5, as best can be understood by the examiner, Chang-572 further teaches that the removable drive has a top panel, bottom panel, and two side

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panels (As illustrated in Fig 2), and wherein the multifunction handle rotates in an upward and a downward direction about an axis that is parallel to the top and bottom panels (As illustrated in Figs 3-5).

With respect to claim 7, as best can be understood by the examiner, Chang-572 in view of Chang-834 further teaches that the handle (21) comprises: a front member (24), a back member (Near 22), a first side member (25) having a first end coupled to the front member (24) and a second end coupled to the back member, a second side member (25) having a first end coupled to the front member (24) and a second end coupled to the back member, and including an aperture (22 of Chang-834) corresponding to the interlock portion and at least one insertion cam (22 of Chang-572) extending from the back member.

With respect to claim 17, as best can be understood by the examiner, Chang-572 further teaches a multifunction handle (21) adapted to be coupled to a removable device (20), the multifunction handle comprising a force-developing portion (End of 22), the handle operable to develop an insertion force at the force-developing portion responsive to a force applied to the handle and different than the force applied to the handle (See response to arguments below). Chang-572 fails to teach that the handle further comprises an interlock portion adapted to be engaged by an interlock component, and operable to be secured in a fixed position responsive to the interlock portion being engaged by the interlock component. Chang-834 teaches a handle (21) for a removable device comprising an interlock portion (22) adapted to be engaged by an interlock component (36), and operable to be secured in a fixed position responsive to

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the interlock portion being engaged by the interlock component (Column 2, Lines 45-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chang-834 with the teachings of Chang-572 to prevent damage to the disk drive (Chang-834 Column 1, Lines 19-22).

With respect to claim 18, as best can be understood by the examiner, Chang-572 further teaches that the force-developing portion (22) comprises a cam (As illustrated in Fig 3).

With respect to claim 19, as best can be understood by the examiner, Chang-834 further teaches that the interlock portion (22) comprises an aperture (As illustrated in Figs 2a and 2b).

With respect to claim 20, as best can be understood by the examiner, Chang-572 in view of Chang-834 further teaches that the handle (21) comprises: a front member (24), a back member (Near 22), a first side member (25) having a first end coupled to the front member (24) and a second end coupled to the back member, a second side member (25) having a first end coupled to the front member (24) and a second end coupled to the back member, and including an aperture (22 of Chang-834) corresponding to the interlock portion and at least one insertion cam (22 of Chang-572) extending from the back member.

With respect to claims 26 and 28, as best can be understood by the examiner, Chang-572 further teaches that the insertion force (at 33) is greater than the force applied to the handle (Column 4, Lines 10-23).

With respect to claims 27 and 29, as best can be understood by the examiner, Chang teaches that the force applied to the handle is applied in a direction (Every force is inherently applied in a direction), and the developed insertion force (at 33) is applied to the removable device at an angle relative to that direction (The second force will inherently be at an angle relative to the first force angle).

Claims 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang-834 in view Chang-572 and further in view of Kawakami (US 6,008,992).

With respect to claim 8, Chang-834 further teaches a computer system comprising: at least one drive bay (10), each drive bay being electrically coupled to the computer circuitry (As evidenced by the electrical connector as shown in Fig 1a), and each drive bay including, an interlock mechanism (30) and a release switch (33); and at least one removable device (20), each removable device being adapted to be positioned in a drive bay (10 as illustrated in Figs 2a and 2b) and including a multifunction handle (21) having an interlock portion (22). Chang-834 fails to teach that the handle develops an insertion force responsive to a force applied to the handle to assist in inserting the device into the bay which assists in inserting the device into the bay and that the interlock mechanism is operable to engage the interlock portion responsive to an activation signal from the computer circuitry, and the interlock mechanism operable to disengage the interlock portion responsive to a deactivation signal from the computer circuitry developed responsive to the release switch being activated. Chang-572 teaches a drive bay (30) and a removable device (20) with a

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handle (21) which develops an insertion force (At 22) responsive to a force applied to the handle to assist in inserting the device into the bay (Chang-572 Column 4, Lines 5-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chang-572 with those of Chang-834 to provide greater force and helping to engage the electrical connector of the removable device with the electrical connector of the drive bay (Chang-572 Column 4, Lines 20-23). With respect to the automation of the interlock mechanism, Kawakami teaches the conventionality of utilizing computer circuitry to automate an interlock mechanism of a drive (See Kawakami Column 7, Lines 9-37 – see also Column 6, Lines 54-57). It would have been obvious to one of ordinary skill in the housing art at the time the invention was made to combine the teachings of Kawakami with that of Chang-834 and Chang-572 to automate the engagement process and prevent erroneous removal of a disk drive from a container case (See Kawakami Column 7 Lines 27-28).

With respect to claim 9, Chang-572 further teaches that the handle (21) includes a cam (as a part of 22) that function as a force-developing portion to develop the insertion force (Column 4, Lines 5-23).

With respect to claim 10, Chang-834 further teaches that the interlock portion comprises an aperture (22) formed in the handle.

With respect to claim 11, Chang-572 further teaches a hard disk drive (HDD, see Column 2, Line 44) which inherently acts as an input device, a data output device, and a permanent data storage device. Additionally the HDD is connected to the computer circuitry via the drive bay.

With respect to claim 13, Chang-834 further teaches that the removable device (20) further comprises a removable mass storage device (See Chang-834 Column 2, Line 10-11 "disk drive").

With respect to claim 14, Chang-834 further teaches that the removable device has a top panel, bottom panel, and two side panels, (As illustrated in Fig 1a) and wherein the multifunction handle rotates in an upward and a downward direction about an axis that is parallel to the top and bottom panels (As illustrated in Fig 1a, the handle (21) rotates up and down around an axis that is parallel to the top and bottom panels).

With respect to claim 16, Chang-834 further teaches a release switch (33) which is positioned adjacent an opening of the drive bay (10 as illustrated in Fig 1a).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weng et al. in view of Chang (US 5,959,834).

With respect to claim 25, as best can be understood by the examiner, Weng et al teaches the limitations as applied to claim 21 above, but fails to teach that disabling the use of the handle comprises inserting a rod through an aperture in the handle. Chang teaches the use of a disk drive system comprising inserting a rod (36) through an aperture (22) in a handle (21) to disable the use of the handle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the handle disabling system of Chang with the disk drive ejection system of Weng et al. to provide another means to lock the disk drive into the bay. The use of the rod provides another means by which the disk drive can remain locked into the drive bay,

and further the locking mechanism of Chang is manual in operation giving the user an alternative manual control over the lock.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 (alternatively), and claims 3-4 are further rejected under 35 U.S.C. 102(b) as being anticipated by Liu et al. (US 6,396,686).

With respect to claim 1, as best can be understood by the examiner, Liu et al. teaches a removable device (40) including a multifunction handle (Comprising 10 and 39) coupled to the device, the multifunction handle including a force-developing portion (A force is developed on portions of 10 when a force is applied to the front of the handle at 39) and including an interlock portion (382) adapted to be engaged by an interlock component (20), the handle operable to develop an insertion force at the force-developing portion responsive to a force applied to the handle and operable to secure the removable device in a desired position (Within the enclosure 50) and prevent use of the handle responsive to the interlock portion being engaged by the interlock component (When the interlocking components (20) are in place, the handle is locked to the removable device and prevents use of the handle (The handle cannot be removed from the disk drive)).

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With respect to claim 3, as best can be understood by the examiner, Liu et al. further teaches that the interlock portion (382) comprises an aperture in the handle and an aperture (42) in a side of the removable device, and wherein the interlock component comprises a rod (24) adapted to extend through the two apertures (As illustrated in Fig 1).

With respect to claim 4, as best can be understood by the examiner, Liu et al. further teaches that the removable device comprises a removable mass storage device (Liu et al; Title).

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-24, 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Weng et al. (US 6,836,406).

With respect to claim 21, as best can be understood by the examiner, Weng et al. teaches a method of inserting a removable drive (2) into a drive bay (20) of a computer system, the removable drive including a handle (11) and the method comprising: applying a force to the handle generating with a force-developing portion of the handle, an insertion force in response to the applied force to insert the drive into the drive bay (Pressing on the exterior of the handle will push the drive into the bay) wherein the insertion force is different than the force applied to the handle (See

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response to arguments below); detecting the insertion of the drive into the drive bay (Status indicator 13 implies that the disk drive system of Weng et al. detects that the drive is inserted into the drive bay); and disabling use of the handle and securing the drive in the drive bay responsive to the detecting the insertion of the drive into the drive bay (Once the drive is inserted into the bay, the handle is made inoperable until the pushing mechanism (16) pushes the handle out; Column 5, Lines 5-11).

With respect to claims 22 and 23, as best can be understood by the examiner, Weng et al further teaches that detecting activation of a release mechanism comprising detecting an activation of a switch (In order for the pushing mechanism (16) to release the handle (11), the pushing mechanism must be triggered by a switch either within the control circuits or physically by the user via use of a button (on the drive itself, or via an input from a displayed button on a screen, etc.).

With respect to claim 24, as best can be understood by the examiner, Weng et al. further teaches updating information stored on the removable drive after detecting activation of a release mechanism and before enabling use of the handle (In Column 3, Lines 15-20 Weng states "a convenient and safe automated disk-ejection" which implies that the disk drive will put itself into condition for removal which includes updating any information on the drive)

With respect to claim 30, as best can be understood by the examiner, Weng et al further teaches that applying the force to the handle (11) include pivoting the handle (As illustrated in Fig 3 of Weng, and as supported by Column 3, Lines 30-33, the handle (11) will need to be moved from the operative state to the inserted state by applying a

force to the handle as detailed in Column 2, Lines 38-39 which will pivot the handle upward).

With respect to claim 31, as best can be understood by the examiner, Weng et al. further teaches detecting activation of a release mechanism; and enabling use of the handle responsive to detecting activation of the release mechanism (After a command is given to release the drive, the pushing mechanism (16) pushes out the handle (11) thus enabling the use of the handle).

Response to Arguments

5. Applicant's arguments filed 10/14/2005 have been fully considered but they are not persuasive.

With respect to claims 1-7, and 17-20 applicant's remark that, "U.S. Patent 5,947,572 issued to Chang (Chang) fails to disclose an insertion force generated by a handle that is different than the force one applies to the handle to generate the insertion force" and the applicant continue on page 8 of the remarks to disclose why Chang fails to disclose a different force than that applied to the handle. The examiner respectfully disagrees. The examiner respectfully cites Chang-572, Column 4, Lines 5-23, specifically lines 9-10 where Chang-572 recites, "a users hand as the point of application of force" and lines 12-13 where Chang-572 recites, "the inner casing 20 becomes the point of reaction where force is applied to the inner casing 20". Such statements by Chang-572 clearly sets forth two separate forces on the handle, one

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which is applied by the user via a hand, and the other via the other end of the handle at the inner casing 20.

With respect to claims 1, 3-4, applicant's remark that, "US Patent 6,396,686 issued to Liu et al. (Liu) fails to disclose an insertion force generated by a handle that is different than the force one applies to the handle to generate the insertion force. The examiner respectfully disagrees. The applicants define two different forces on the handle, one that is generated by the user, and one that is generated by the handle in response to the force generated by the user. The examiner asserts that the handle (of Liu) will inherently produce a second force (insertion force) that is different from the first force (that which is applied to the handle directly by the user). When the drive is inserted into the bay (50 as illustrate in Fig 4) via the handle (39), areas of the handle (such as near 30 as illustrated in Fig 1) will also produce another, different force which will be exerted on different parts of the bay (such as the guide rail (56)) thereby creating a second force which is different than the first force.

With respect to claims 21-22, applicant's remark that, "Weng fails to disclose generating, with a handle, an insertion force that is different than the force one applies to the handle to generate the insertion force". The examiner respectfully disagrees and asserts that there are multiple forces used to insert the drive (2) into the drive bay (20). Weng et al. teaches in Column 2, Lines 38-39 that a pushing force (F1) is applied to the handle (11) which will cause the inside portion of the handle (11) to place an insertion force (F2) onto the disk box panel (17 – See fig 4). The pushing force (F1) and the

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insertion force (F2) are two different forces which both result in the disk drive being inserted into the drive bay.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP


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